ABSTRACT OF THE DISCLOSURE

An acceleration sensor includes a piezoelectric element and support frames for supporting the ends of the piezoelectric element in the longitudinal direction. The piezoelectric element is formed by stacking an even number of piezoelectric layers greater than or equal to four layers. Electrodes are provided in between the layers and on the front and back faces of the piezoelectric element. The interlayer electrodes including a segmented electrode and lead electrodes are alternately stacked with the piezoelectric layers therebetween. The interlayer electrode in the middle in the thickness direction is a segmented electrode. The piezoelectric layers are polarized in the thickness direction so that charge having the same polarity is extracted from the electrodes when the acceleration is applied. Also, the center portion and both end portions of each piezoelectric layer are polarized in opposite directions.